MODIS Technical Team Meeting
Thursday, August 22, 2002
Building 33, Room E125

Vince Salomonson chaired the meeting. In attendance were Chris Justice, Bill Barnes, Ed Masuoka, Eric Vermote, Steve Kempler, Wayne Esaias, and Jack Xiong, with Yolanda Harvey taking the minutes.

1.0 Upcoming Events

- Remote Sensing of the Earth's Environment from Terra, a Workshop at the International Summer School on Atmospheric and Oceanic Science, August 25-30, 2002, L'Aquila, Italy
- 34th COSPAR Scientific Assembly, October 10-19, 2002, Houston, TX (abstract deadline past)
- MODIS Outreach Workshop on Land Surface Radiation and Snow and Ice Products, October 21-22, 2002, Boston, MA

2.0 Meeting Minutes

2.1 General Discussion

Salomonson called the meeting to order by saying that the MODIS portion of the EOS data handbook needs to be updated and resubmitted. Also, if anyone has data product images that will look good in grayscale and ultimately use in the Data Handbook, please let Barbara Conboy or him know.

Justice mentioned that he is teaching a class this coming fall semester, and that during his preparations he found a textbook that uses MODIS images extensively (authored by Christopherson). Salomonson said that he heard a great presentation on the Earth Observatory by David Herring. It reinforced the idea that MODIS comes up with a wealth of high quality images that can be used in publications like textbooks. Also, Salomonson mentioned that Herring and Rob Simmons are starting to put MODIS data sets (e.g., aerosols) into the Earth Observatory using a georeferenced .tiff format that allows people to do data overlays and transects of or slices through the data for training and education purposes.

Salomonson mentioned a recent article by J. C. Seong (Northern Michigan State University), Karen A. Mulcahy (East Carolina University) and E. Lynn Usery (University of Georgia) describing the sinusoidal projection. The article mentioned that MODIS' choice of ISIN (or SIN) projection is very reasonable. The reference can be obtained from Ed Masuoka.

Salomonson said that Brian Geurtz, Acting Goddard Patent Counsel, called and said that an agreement in principle has been reached with the University of Miami on the release of oceans code for Direct Broadcast, etc. The agreement also included a favorable

review by the Goddard Chief Counsel as well. There is still paperwork to be completed, but this represents major progress.

Salomonson announced that we have now received 5,000 copies of the Introductory MODIS Introductory Data Set CD. These will be available primarily for distribution at scientific conferences. Justice asked whether there has been a demand for the data from the ftp site, and Salomonson said that the last time he checked it was around 15 requests per day. Kempler suggested adding a link from the DAAC sites to the MODIS ftp site. Justice asked about MODIS-related articles in the EOS Newsletter and Salomonson said that a summary of the MODIS Science Team meeting is to be prepared for the September/October edition

2.2 Instruments

2.2.1 Aqua MODIS

Barnes reported that because of a command loss problem, the SD door stayed open for a week, but there was no loss of or impact on the science data. A Tiger team will go over the event and find out what the worst possible results can be from dropping a command, and also figure out a way to monitor the commands to make sure they are accepted. Xiong said that Jack looked at the effects on the SD of having the door open for a week (5 days, 14 orbits per day, resulting in a total of 70 exposures to the sun), and he didn't find any degradation.

2.2.2 Terra MODIS

Barnes said that the formatter resets are up to 51 million events per day. The Instrument Operations Team (IOT) knows to look for a certain kind of error signal from the formatter that will signal the need to switch formatters. They are looking in the telemetry for the signal because they can't scan every pixel. The first science data impact could be a shift of one pixel per scan line, and there is a slight chance that they could miss noticing the initial error. Xiong pointed out that there is a five-day delay between the telemetry data getting from the instrument to them. Masuoka asked if there is any impact beyond some slightly shifted products? Esaias said that as soon as they have hard evidence, they will switch formatters, but the problem lies in distinguishing noise from the true event. Vermote pointed out that the spacecraft itself can impact the data and cause missing pixels; he is seeing quite a few of them. Xiong said that they are tracking the data and are looking for substantial recent changes, and in general the missing data rate is stable. Salomonson said that the implicit question is whether we should switch the formatter earlier. Wayne pointed out that as soon as we switch, we no longer have redundancy. Barnes said that the extra formatter is a resource he doesn't want to give up, because there is probably no going back. In response to a question by Salomonson, Barnes said that MODIS is currently set up so that if it goes into safe hold it will not switch off the formatter.

Salomonson said that Terra is going forward with the plan for a deep space calibration maneuver, which will probably happen in December if HQ approves this. One new aspect is that a case is being made for using the Moon as inter-calibration source for both MODIS and SeaWiFS.

2.3 DAAC

Kempler said that Aqua and Terra forward processing is going well. They had a problem with the archive this past week – the machine running the data pool has been taken offline and everything is now running faster. Oceans reprocessing is 3 days ahead of their latest projection, and a half-day ahead of ingesting data from DAACs. Masuoka said that Atmospheres reprocessing will go on as planned. The University of Miami will make a complete delivery of Oceans code by the September 4, so they should be able to make the October 15 reprocessing date. Salomonson asked whether Land would be earlier than November 1, and Masuoka replied that they have to start by the middle of November. He continued that to get the ISIN to SIN grid change done by October 22-25, all 16 CMGs to be changed must be put in first, and the current schedule assumes that this has happened already. He said that they may be able to start on the right date if everything comes in as planned. Salomonson said that he doesn't want to push Atmospheres reprocessing back. Masuoka said that if the Atmospheres PGO6 comes in next week, Atmospheres should meet a mid-October start date.

2.4 MODAPS

Masuoka said that he talked to Mike Moore who told him that there may be some resources for MODAPS regarding archival issues. These resources will address MODIS priorities 1 and 2, and they are only going to do the DAAC upgrades on additional ingest rates and input ports. The DAAC should get their next 1x in February of 2003, and they would be able to catch Land up to Atmospheres assuming a 4x ingest and output rate to the DAACs. Masuoka said that he is working on a re-phased budget that reflects a possible $1million cut for MODAPS. Kempler is also working on the impacts of a budget cut for the DAAC.

Masuoka reported that he sent Kaufman the tool for geodetic referencing Masuoka said that he asked Moore about making Land, Oceans, and Atmospheres sites into locations for 1-click granule ordering, and Moore said that one option is to set up a machine-to-machine gateway, and another is to order through the V0 gateway. Salomonson said that he visit further with Mike Moore, et al., to assess further the possibilities that the discipline's browse tools can be helpful for easing the process of ordering products. Vermote asked whether the machine-to-machine gateway would be for the Science Team's use, as was the original plan. Masuoka said that he would have to check on that. Currently, it would only work with the Goddard DAAC. He is asking the EDC to install the software, and they're looking at it, but have issues. Kempler said they developed a Terra-WHOM data pool that can be used as a prototype for other DAACs. He continued that the Terra-WHOM looks at published metadata and knows what is available, so is able to get data much quicker. For this to work at other sites, they will have to publish their metadata and ancillary data to the same server. He said that this is a viable option. Masuoka said that they would have to do more work to make this system useable for other instruments

2.5 Oceans
Esaias said that he had just come from a meeting with the SeaWiFS people and that everything seems to be in good shape relative to SeaWiFS/MODIS coordinated data sets, etc.

3.0 Action Items

3.1 New Action Items
None.

3.2 Old Action Items
3.2.1 Technical team to discuss further the issue of predicted ephemeris data and how to improve it.
Status: Open.
Ed Masuoka and Robert Wolfe plan to meet with the Terra Flight Operations Team to see if they can run definitive ephemeris 2-4 times per day. The context for this issue to provide better geolocation information for things like fire front tracking and similar issues.

3.2.2 The procedure for releasing Aqua MODIS products needs to be further refined via Discipline discussions and coordination with the Science Team leader, et al.
Status: Open.